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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,763	11/03/2003	Dirk Basting	LMPY-20310 [358/U]	4237

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EXAMINER	
FINNEREN, RORY B	

ART UNIT	PAPER NUMBER
2828	

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/699,763	BASTING ET AL.	
	Examiner	Art Unit	
	Rory Finneren	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *50-63* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *50-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The examiner acknowledges the cancellation of claims 1-49 as well as the addition of new claims 50-63.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 50 and 59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 50, in the first line of the third paragraph of the claim, applicant has failed to make clear which circuit "said circuit" refers to. Additionally, applicant has failed to make clear any structural relationship between said "input corresponding to a laser parameter" and the jitter compensation circuit. The structure of this "input" is unclear, as is where this input signal is coming from. Appropriate correction is required.

Claim 59 has the same issues as claim 1 in the fourth paragraph of the claim pertaining to the jitter compensation circuit. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 50, 51, and 53-63 are rejected under 35 U.S.C. 102(b) as being anticipated by Basting et al (6,005,880).

Regarding claim 50, Basting discloses an excimer laser system (Fig. 18a; col. 7-8)), comprising:

First ("laser 1 discharge") and second discharge chambers ("laser 2 discharge") each being filled with a gas mixture (col. 1, lines 20), each of said first and second discharge chambers containing a pair of electrodes (Fig. 18(b), D_1 & D_2) for energizing the gas mixture and outputting an optical pulse;

Circuitry for providing separate, sequential excitation pulses to said first and second discharge chambers (Fig. 18b; col. 7-8); and

A jitter compensation circuit (Fig. 18a; variable time delay generators generating delays t_1, t_{21}, t_{22}; col. 7-8), said circuit receiving an input corresponding to a laser parameter which exhibits pulse to pulse variations (input from pulse compressor), said compensation circuit generating a variable delay signal in response to the input and supplying the signal to said circuitry to control the relative timing of the excitation pulses delivered to the first and second discharge chambers on a pulse to pulse basis (Abstract; and col. 7-8).

Regarding claim 51, Basting discloses a laser system as recited in claim 50 wherein said laser parameter is the voltage on a storage capacitor (C_0, C_1, C_2), a reset current ("dc reset current"; col. 3-6), and/or a core magnetization (col. 3, line 55- col.4).

Regarding claim 53, Basting discloses a laser system as recited in claim 50, wherein said jitter compensation circuit includes a fast analog circuit ("high-voltage excitation circuit", Summary of the Invention).

Regarding claim 54, Basting discloses a laser system as recited in claim 50, wherein the circuitry includes a separate pulser for each discharge chamber (Fig. 18a, see two separate pulse compressors, one for each discharge chamber).

Regarding claim 55, Basting discloses a laser system as recited in claim 50, wherein the circuitry includes a common pulser system and the compensation circuit compensates for jitter between channels of the common pulser (Fig. 17a and 17b).

Regarding claim 56, Basting discloses a laser system as recited in claim 50, further including a feedback loop to compensate for jitter caused by slower, non-pulse to pulse changes (col. 2, lines 7-21).

Regarding claim 57, Basting discloses a laser system as recited in claim 56, wherein said feedback loop monitors the delay between the excitation of the two discharges and generates a signal in response thereto that is supplied to the compensation circuit and is used in generating the variable delay signal (col. 2, lines 7-21).

Regarding claim 58, Basting discloses a laser system as recited in claim 50, wherein the first discharge chamber functions as an oscillator and the second discharge

chamber functions as an amplifier to amplify the optical pulses generated by the first discharge chamber (col. 5, lines 44-45; Fig. 18a, col. 7-8).

Regarding claim 59, Basting discloses an excimer laser system comprising:

a master oscillator including a discharge chamber (Fig. 18a, laser 1 discharge chamber) filled with a gas mixture and containing a pair of electrodes (Fig. 18b, D_1) for energizing the gas mixture and outputting an optical pulse (col. 7-8);

circuitry for providing separate, sequential excitation pulses to said oscillator and amplifier (Fig. 18a, see two separate pulse compressors); and

a jitter compensation circuit (Fig. 18a; variable time delay generator generating delay t_1; col. 7-8), said circuit receiving first inputs corresponding to a laser parameter which exhibits pulse to pulse variations (input from pulse compressor) and second inputs corresponding to slower, non-pulse to pulse variations (inputs of t_{21}, t_{22}), said compensation circuit generating a variable delay signal in response to said first and second inputs and supplying the signal to said circuitry to control the relative timing of the excitation pulses delivered to the oscillator and the amplifier (abstract and col. 7-8).

Regarding claim 60, Basting discloses a laser system as recited in claim 59 wherein said laser parameter is the voltage on a storage capacitor (C_0, C_1, C_2), a reset current ("dc reset current"; col. 3-6), and/or a core magnetization (col. 3, line 55- col.4).

Regarding claim 61, Basting discloses a laser system as recited in claim 59, wherein the circuitry includes a separate pulser for the oscillator and the amplifier (Fig. 18a, see two separate pulse compressors, one for the oscillator, one for the amplifier).

Regarding claim 62, Basting discloses a laser system as recited in claim 59, wherein the circuitry includes a common pulser system and the compensation circuit compensates for jitter between channels of the common pulser (Fig. 17a and 17b).

Regarding claim 63, Basting discloses a laser system as recited in claim 56, wherein said compensation circuit monitors the delay between the excitation of the oscillator and the amplifier and is used to generate said second inputs (col. 2, lines 7-21).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Basting in view of Fielden et al (4,459,541).

Regarding claim 52, Basting discloses the claimed excimer laser system except the reference does not explicitly disclose a "differential high voltage probe." Fielden discloses a differential high voltage probe used to measure voltage on a capacitor and demonstrates that it was well known in the art at the time of the present invention.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use such a "differential high voltage probe" for the purpose of measuring voltage on the storage capacitor.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rory Finneren whose telephone number is (571) 272-2243. The examiner can normally be reached on Mon. - Fri. 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Oh Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Minsun Harvey
Supervisory Patent Examiner
Art Unit 2828

RBF